

Appl. No.: 10/673,935
Filed: 9/30/03
Amdt. dated 05/09/2006

Amendments to the Claims:

1-17. (Canceled)

18. (Amended) An isolated β -glucuronidase (GUS) protein encoded by a nucleic acid selected from the group consisting of:

(a) ~~DNA having the nucleotide sequence given herein as SEQ ID NO:1;~~
(a**b**) ~~a polynucleotide that hybridizes hybridize to the complement of the nucleotide sequence of SEQ ID NO:1~~ ~~DNA of (a) above~~ under stringent conditions represented by a wash stringency of 50% formamide with 5x Denhardt's solution, 0.5% SDS and 1x SSPE at 42°C, and which encodes a β -glucuronidase (GUS) protein; and
(b) ~~a polynucleotide polynucleotides that differs differ from the nucleotide sequence of SEQ ID NO:1~~ ~~DNA of (a) or (b) above~~ due to the degeneracy of the genetic code, and which encodes ~~the GUS protein encoded by a DNA of (a) or (b) above.~~

19. (Original) An isolated GUS protein according to claim 18 having the amino acid sequence given herein as SEQ ID NO:2.

20. (Canceled)

21. (New) An isolated polypeptide encoded by a polynucleotide having at least 80% homology to the nucleotide sequence of SEQ ID NO:1, wherein said polypeptide has GUS activity.

22. (New) The isolated polypeptide of claim 21, wherein said polynucleotide comprises at least 90% homology to the nucleotide sequence of SEQ ID NO:1.

23. (New) The isolated polypeptide of claim 21, wherein said polypeptide is encoded by the nucleotide sequence SEQ ID NO:1.

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24 (New) The isolated polypeptide of claim 21, wherein said polypeptide is encoded by a polynucleotide that differ from SEQ ID NO:1 by the degeneracy of the genetic code.

25. (New) The isolated polypeptide of claim 21, wherein said polypeptide has peak GUS activity at a pH of from 3 to 5 in 1.0 M sodium phosphate buffer using 1.0 mM PNPG substrate concentration.